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Amendment and Response

Serial No.: 09/560,268 Confirmation No.: 2517 Filed: April 26, 2000

FOI: COMPOSITION FOR SELECTIVELY ETCHING AGAINST COBALT SILICIDE

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the aboveidentified application:

Listing of Claims

1-63. Canceled

- 64. (Currently Amended) An etching composition, the composition comprising a mineral acid, a peroxide, and deionized water at a ratio in a range of about 1:1:25 (mineral acid:peroxide:deionized water) to about 1:1:10 1:1:15 (mineral acid:peroxide:deionized water).
- 65. (Previously Presented) The etching composition according to claim 64, wherein the mineral acid is HCl and the peroxide is hydrogen peroxide.
- 66. Canceled
- 67. (Previously Presented) The etching composition according to claim 64, wherein the mineral acid is selected from the group consisting of HCl, HNO₃, H₂SO₄, H₃PO₄, and HF.
- 68. (Currently Amended) An etching composition, the composition comprising a mineral acid, a peroxide, and deionized water at a ratio in a range of about 1:1:35 (mineral acid:peroxide:deionized water) to about 1:1:5 1:1:15 (mineral acid:peroxide:deionized water), wherein the composition has an etch rate greater than about 1000 Å/minute for cobalt at a temperature in a range of about 20 degrees centigrade to about 100 degrees centigrade.
- 69. (Previously Presented) The etching composition according to claim 68, wherein the mineral acid is HCl.



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(Previously Presented) The etching composition according to claim 68, wherein the 70. peroxide is hydrogen peroxide.

- (Currently Amended) The etching composition according to claim 68, wherein the ratio 71. is in a range of about 1:1:25 (mineral acid:peroxide:deionized water) to about 1:1:10 1:1:15 (mineral acid:peroxide:deionized water).
- (Currently Amended) The etching composition according to claim 68, wherein the 72. composition has an etch rate of about 50 A/minute to about 250 A/minute for metal nitride at a temperature in a range of about 20 degrees centigrade to about 100 degrees centigrade.
- (Currently Amended) An etching composition, the composition comprising a mineral 73. acid, a peroxide, and deionized water at a ratio in a range of about 1:1:35 (mineral acid:peroxide:deionized water) to about 1:1:5 1:1:15 (mineral acid:peroxide:deionized water), wherein the composition has an etch rate of about 50 A/minute to about 250 A/minute for metal nitride at a temperature in a range of about 20 degrees centigrade to about 100 degrees centigrade.
- (Previously Presented) The etching composition according to claim 73, wherein the 74. mineral acid is HCl.
- (Previously Presented) The etching composition according to claim 73, wherein the 75. peroxide is hydrogen peroxide.
- (Currently Amended) The etching composition according to claim 73, wherein the ratio 76. is in a range of about 1:1:25 (mineral acid:peroxide:deionized water) to about 1:1:10 1:1:15 (mineral acid:peroxide:deionized water).





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77-88. Canceled

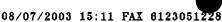
89. (Currently Amended) An etching composition, the composition consisting essentially of a mineral acid, a peroxide, and deionized water at a ratio in a range of about 1:1:35 (mineral acid:peroxide:deionized water) to about 1:1:15 (mineral acid:peroxide:deionized water), wherein the composition has an etch rate of about 50 Å/minute to about 250 Å/minute for metal nitride at a temperature in a range of about 20 degrees centigrade to about 100 degrees centigrade and an etch rate greater than about 1000 Å/minute for cobalt at a temperature in a range of about 20 degrees centigrade to about 100 degrees centigrade.

90. (Previously Presented) The composition according to claim 89, wherein the mineral acid is HCl and the peroxide is hydrogen peroxide.

Canceled

- 92. (Currently Amended) The composition according to claim <u>89</u> 91, wherein the ratio is in a range of about 1:1:25 (mineral acid:peroxide:deionized water) to about <u>1:1:10</u> <u>1:1:15</u> (mineral acid:peroxide:deionized water).
- 93. (Previously Presented) The composition according to claim 89, wherein the mineral acid is selected from the group consisting of HCl, HNO₃, H₂SO₄, H₃PO₄, and HF.
- 94. (Currently Amended) An etching composition, the composition comprising a mineral acid, a peroxide, and deionized water at a ratio in a range of about 1:1:25 (mineral acid:peroxide:deionized water) to about 1:1:10 1:1:15 (mineral acid:peroxide:deionized water), wherein the mineral acid is selected from the group consisting of HCl diluted to 37% by weight in deionized water, HNO₃ diluted to 70% by weight in deionized water, H₂SO₄ diluted to 96% by weight in deionized water, H₃PO₄ diluted to 85% by weight in deionized water, and HF diluted







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to 49% by weight in deionized water, wherein the peroxide is selected from the group consisting of hydrogen peroxide diluted to 29% by weight in deionized water, and ozone.

95. (Previously Presented) The etching composition according to claim 94, wherein the mineral acid is HCl and the peroxide is hydrogen peroxide.

96. Canceled

